



OPERATING SYSTEMS COURSE

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Topic 1 Presentation Guide: Introduction to Operating Systems

In this topic a number of general concepts of operating systems are presented . It is not intended to conduct a thorough presentation of them, since this type of information can be found in any general book of operating systems. First, the functions of the operating system are described, then its basic components as well as various types of OS organization. Finally , it explains how the operating system activation occurs and, specifically, how it performs a system call .

To cover those aspects, the topic includes two lessons:

- Introduction to Operating Systems.
 - Concepts, structure, OS components, and activation process of the OS.
- Operating System services.
 - OS service concept, services associated to the OS components, system calls as interface to make OS programming.

The primary objective of the subject is to introduce some basic concepts that will be addressed in detail throughout the course. That overall objective is broken down into a series of specific objectives, which are listed below:

- Globally understand the structure and operation of the computer.
- Remember computer elements that impact on the operating system.
- Understand what an operating system is.
- Knowing the main components and services Operating System .
- Understanding the boot process of the operating system .
- Understanding what an operating system service .
- Understanding the mechanisms involved in a system call .
- Knowing the characteristics of the POSIX interface.
- Knowing the main services offered by POSIX for processes and files.

Associated Materials

The theoretical lessons are complemented with exercises for each of them, to be resolved after the classes, as specified in the schedule associated with the teaching guide.

Mandatory and recommended reading with more problems and solved exercises are included, so that students can complete their training.